NASA Glenn Success Stories

Hybrid Power Management (GRC) Program Develops Unique Smoke Detector

JME, Inc.

TECHNOLOGY

Hybrid Power Management (HPM) is the art of combining diverse power devices in an optimal configuration for space and terrestrial applications. The ultracapacitor has an extremely long life, excellent low temperature characteristics, and is rugged, reliable, and maintenance free. This is ideal for safety systems.

Smoke detectors can be greatly improved through the application of Hybrid Power Management (HPM).

COMMERCIAL APPLICATION

- Applications include power generation, transportation, biotechnology, and space power systems.
- Capacitors can be used to replace traditional batteries in smoke detectors

SOCIAL / ECONOMIC BENEFIT

- HPM has the potential to significantly alleviate global energy concerns, improve the environment, and stimulate the economy.
- Unlike smoke detectors which have batteries that must be replaced every year, a hybrid smoke detector never needs to be replaced
- Relatively inexpensive to produce

NASA APPLICATIONS

- HPM provides reliable, long life energy storage systems essential for aeronautic and deep space missions. HPM also provides safe energy storage for drop tower research.

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